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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,814	03/19/2004	Andrew A. Frank	UC03-084-3	7074
8156	7590	03/07/2006	EXAMINER	
JOHN P. O'BANION O'BANION & RITCHEY LLP 400 CAPITOL MALL SUITE 1550 SACRAMENTO, CA 95814			LEWIS, TISHA D	
			ART UNIT	PAPER NUMBER
			3681	

DATE MAILED: 03/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/804,814	<b>Applicant(s)</b> FRANK ET AL.	
	<b>Examiner</b> TISHA D. LEWIS	<b>Art Unit</b> 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

The following is a response to the amendment received on December 27, 2005 which has been entered.

### ***Information Disclosure Statement***

The information disclosure statement filed on August 11, 2005 has been considered.

### ***Response to Amendment***

Claims 1-26 are pending in the application. Claims 27-32 are cancelled.

-The 102(b) rejections of claims 1-13 has been withdrawn due to applicant amending claims 1, 3, 5, 7, 9, 11 and 13 with limitations not disclosed in the prior art used in the rejections.

### ***Response to Arguments***

Applicant's arguments have been fully considered but they are not persuasive. As to applicant's argument of the 103(a) rejection of claims 14-26, the amendment to claims 14, 16, 18, 20, 22, 24 and 26 does not disclose dynamically controlling acceleration and deceleration of the vehicle ***directly*** from the rate of change of ratio. The Frank reference ('844) does disclose dynamically (variation in force or motion) varying the acceleration and deceleration directly from the rate of change of ratio (R). The Frank reference does disclose that the rate of ratio is controlled (column 4, lines 39-41) and the WO reference also discloses that the rate of ratio is controlled (claims 15 and 16). The WO reference was used to show that the graph of Figure 4 can be consistent with the mapping limitation used in the claims of the present invention in

which the graph does disclose controlling/obtaining a desired rate of change of ratio (ROC) with a pressure (Ps or Pf) used to control the pulleys of the CVT. Therefore, since the limitation "mapping" doesn't really disclose what can or can not be used to represent control of the rate of change, the references used in the 103(a) rejection still seem to meet the limitations as presented.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frank ('844) in view of WO. Frank discloses a hybrid electric vehicle having a continuously variable transmission (18), an internal combustion engine (10) coupled to the CVT, an electric motor (24) coupled to an output of the engine, a system controller (30) controlling the motor, engine and rate of change of ratio of the CVT dynamically varying an acceleration (via 32) and deceleration (via 34) by varying motor torque (42) and rate of change of ratio (44), but does not disclose mapping a rate of change of ratio to clamping pressure and the remaining limitations used for this in claims 1-13.

WO discloses a control system for a continuously variable transmission having a programmable controller (17-19), means associated with the controller for mapping rate of change of ratio to clamping pressure between the pulleys of the CVT (clms 3-5, Figure 4 (algorithm or map), a hydraulic servo control system (15, 16, 20, 21) controlled

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by the controller and controlling clamping pressure of the CVT, achieving a desired rate of change in ratio of the CVT (ROC), achieving a commanded clamping pressure ( $P_f$ ,  $P_s$ ) in response to an input torque ( $T_p$ ) and a commanded ratio rate (RC) based on a mapping of empirical data pertaining to pressure (cylinder pressure), ratio rate (pulley ratio) and torque (transmission torque), controlling the ratio rate and clamping pressure based on a ratio map (mapping of ratio rate above), and transmitting a given amount of torque ( $T_t$ ) according to the map (Figure 4).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide Frank with a mapping rate of change ratio to clamping pressure in view of WO to prevent slipping of the drive belt.

#### FACSIMILE TRANSMISSION

Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 872-9326 before final and 703-872-9327 after final**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mail room processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check **should not be** submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to  
the Patent and Trademark Office (Fax No. (703) 000-0000) on \_\_\_\_\_ (Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_

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(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 571-272-7093. The examiner can normally be reached on M-Thur 6 AM TO 2:30 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CHARLES A. MARMOR can be reached on 571-272-7095. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tdl  
March 5, 2006

  
TISHA LEWIS  
PRIMARY EXAMINER  
AU 3681 3/5/06